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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,596	09/28/2004	David R. Hall	66.0077	5595

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EXAMINER

COY, NICOLE A

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 09/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/711,596

Applicant(s)

HALL ET AL.

Examiner

Nicole Coy

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 30 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6, 8-15, and 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Restarick et al. (USP 6,684,951).

With respect to claim 1, Restarick et al. discloses a filter for a drill string, comprising: a perforated receptacle (100a) having an open end (132) opposite a perforated end (the end shown at the right of figure 7b); a flange (131) extending perpendicularly from an axis of the receptacle (wherein the thickness of 131 is perpendicular from an axis of the receptacle) and being attached to the receptacle adjacent the open end, the flange comprising first and second mounting surfaces (wherein 135a is on a first mounting surface and 135b is on a second mounting surface, see figure 7c); and an annular transmission element (135a, 135b in figure 7c; 134b and 134a in figure 7b) disposed in grooves (see figure 7c wherein the un-numbered white portion is the groove and the wire runs through the flange) formed in each of the first and second mounting surfaces (see figures 7b and 7c), wherein the respective transmission elements are in electrical communication with each other and with a

transmission network integrated into the drill string (see figure 7b wherein 134a and 134b are in communication with each other via 136b).

With respect to claim 2, Restarick et al. discloses that each mounting surface comprises a groove which houses the transmission element (see figure 7c).

With respect to claim 3, Restarick et al. discloses that at least one of the mounting surfaces comprise a passageway intersecting the groove and in fluid communication with the open end of the filter (see figure 7c).

With respect to claim 4, Restarick et al. discloses that least one of the grooves comprise a biasing element adapted to bias the transmission element towards an adjacent transmission element (see figure 7d).

With respect to claim 5, Restarick et al. discloses that the transmission elements are selected from the group consisting of inductive couplers, direct electrical contacts, and optical couplers (see figure 7c, 135a and 135b are direct electrical contacts).

With respect to claim 6, Restarick et al. discloses that the transmission elements are connected by a third conductor forming a LC circuit (see figure 7b wherein 136b is a third conductor).

With respect to claim 8, Restarick et al. discloses that the perforated receptacle (100) is corrosion-resistant (wherein 100 is inherently corrosion-resistant because it is used in a borehole).

With respect to claim 9, Restarick et al. discloses that the filter further comprises an electronic component (102).

With respect to claim 10, Restarick et al. discloses that the electronic component is selected from the group consisting of a sensor, a router, a power source, a clock source, a repeater, an electronic processor, an integrated circuit, a network node, and an amplifier (wherein 102 is a sensor).

With respect to claim 11, Restarick et al. discloses that the filter further comprises a mandrel (120) mounted coaxially within a central bore of the drill pipe (see figure 7a) and adapted for removing the filter (wherein the mandrel is capable of removing the screen).

With respect to claim 12, Restarick et al. discloses a filter for a drill string, comprising: a perforated, corrosive resistant receptacle (100a) having an open end (132) opposite a perforated end (the end shown at the right of figure 7b); first and second mounting surfaces are formed by a flange which extends perpendicularly from an axis of the receptacle (wherein the thickness of 131 is perpendicular from an axis of the receptacle) and are attached adjacent the open end (wherein 135a is on a first mounting surface and 135b is on a second mounting surface, see figure 7c); and a transmission element (135a, 135b in figure 7c; 134b and 134a in figure 7b) disposed within a groove (see figure 7c wherein the un-numbered white portion is the groove and the wire runs through the flange) in each of the first and second mounting surfaces (see figures 7b and 7c), wherein the respective transmission elements are in communication with each other via an electrical conductor forming an LC circuit and with a transmission network integrated into the drill string (see figure 7b wherein 134a and 134b are in communication with each other via 136b and form an LC circuit).

With respect to claim 13, Restarick et al. discloses that the mounting surfaces comprise a passageway intersecting the groove and in fluid communication with the open end of the filter (see figure 7c).

With respect to claim 14, Restarick et al. discloses that the groove comprises a biasing element adapted to bias the transmission elements towards adjacent transmission elements (see figure 7d).

With respect to claim 15, Restarick et al. discloses that the transmission elements are selected from the group consisting of inductive couplers, direct electrical contacts, and optical couplers (see figure 7c, 135a and 135b are direct electrical contacts).

With respect to claim 17, Restarick et al. discloses that the filter further comprises an electronic component (102).

With respect to claim 18, Restarick et al. discloses that the electronic circuitry is selected from the group consisting of a sensor, a router, a power source, a clock source, a repeater, an electronic processor, an integrated circuit, a network node, and an amplifier (wherein 102 is a sensor).

With respect to claim 19, Restarick et al. discloses that the filter further comprises a mandrel (12) mounted coaxially within a central bore of the drill pipe (see figure 7a) and adapted for removing the filter (wherein the mandrel is capable of removing the screen).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Restarick et al.

With respect to claims 7 and 16, Restarick et al. is silent as to whether a capacitor modifies the electrical characteristics of the LC circuit. However, it is well known in the art to use capacitors in order to modify the characteristics of a circuit. Thus, it would have been obvious to modify Restarick et al. by including a capacitor in the circuit, in order to modify the electrical characteristics.

Response to Arguments

5. Applicant's arguments filed 6/30/06 have been fully considered but they are not persuasive. Applicant argues that Restarick does not teach or disclose transmission element disposed within mounting surfaces formed by a flange which is attached adjacent the open end and also extending perpendicularly from an axis of the receptacle. As noted above, the thickness of the flange is perpendicular to the axis of the receptacle. It is noted that the claim language does not define that the length of the flange is perpendicular to the axis of the receptacle or the location of the transmission elements.

As noted above, Restarick also discloses a perforated end (the right of 100a in figure 7b) opposite the open end (132). In addition, Restarick discloses that the transmission elements are disposed in grooves which are formed in mounting surfaces formed by the flange (see figure 7c wherein the un-numbered white portion is the groove and the wire runs through the flange).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 3672

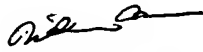
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicole Coy whose telephone number is 571-272-5405.

The examiner can normally be reached on M-F 7:30-5:00, 1st F off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

nac


William Neuder
Primary Examiner